

HU-073 OLED Display Humidifier Production Kit

OLED Display Humidifier Production Kit

I. Function

1. Atomize liquid water

Atomize liquid water

2. Humidification timing function

Humidification timing function

3. OLED multi-level menu management

OLED multi-level menu management

4. Power off memory function

Power off memory function

5. Update ambient temperature and humidity in real time

Real time update of environmental temperature and humidity

II. Characteristics

1. Using OLED screen, you can view real-time temperature, humidity and timing more clearly

By using an OLED screen, real-time temperature, humidity, and timing can be viewed more clearly

2. OLED multi-level menu management makes it easier and more convenient for users to use

OLED multi-level menu management makes it more convenient and simple for users to use

3. Power supply: USB power supply (5V)

Power supply method: USB power supply (5V)

4. Maximum operating current: about 280mA (when the humidifier is started)

Maximum operating current: approximately 280mA (When the humidification function is activated)

5. PCB size: 60*60mm

PCB size: 60 * 60mm

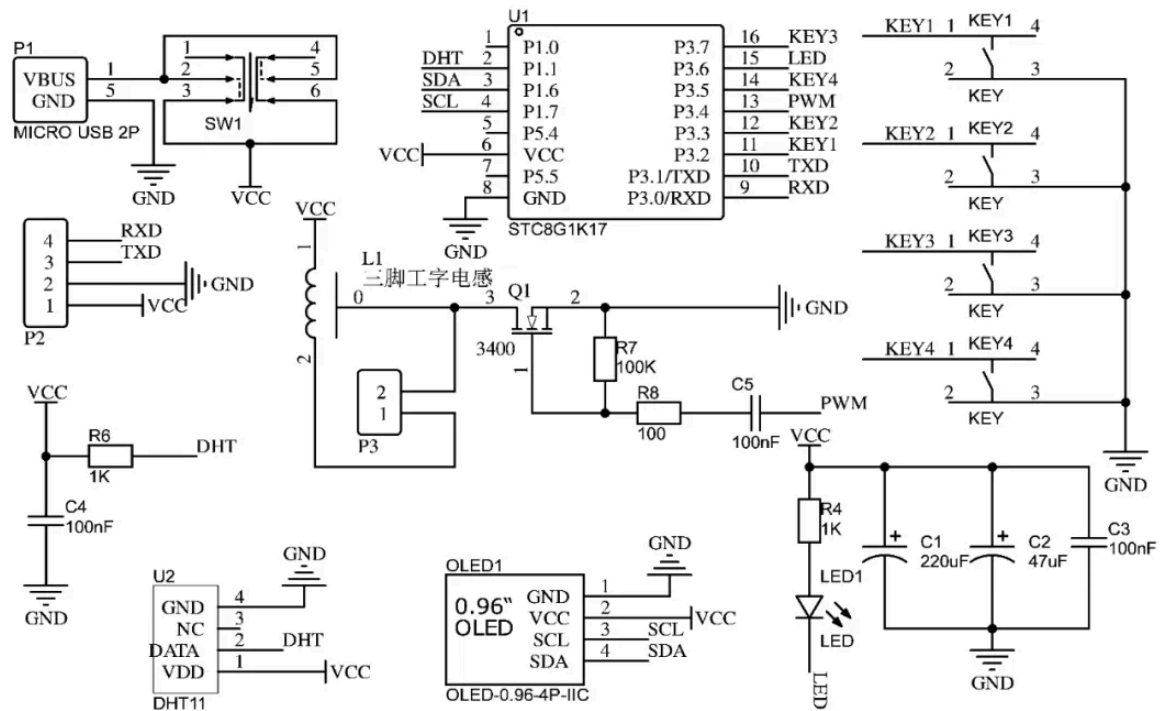
III. Bill of Materials (BOM)

Serial number	name	Name	Label	Number	Remarks
1	Electrolytic capacitor 220uF	Electrolytic capacitor 220uF	C1	1	/
2	Electrolytic capacitor 47uF	Electrolytic capacitor 47uF	C2	1	/
3	light-emitting diodes	led	LED1	1	/
4	100Ω in-line resistor	Direct insertion resistor 100Ω	R8	1	/

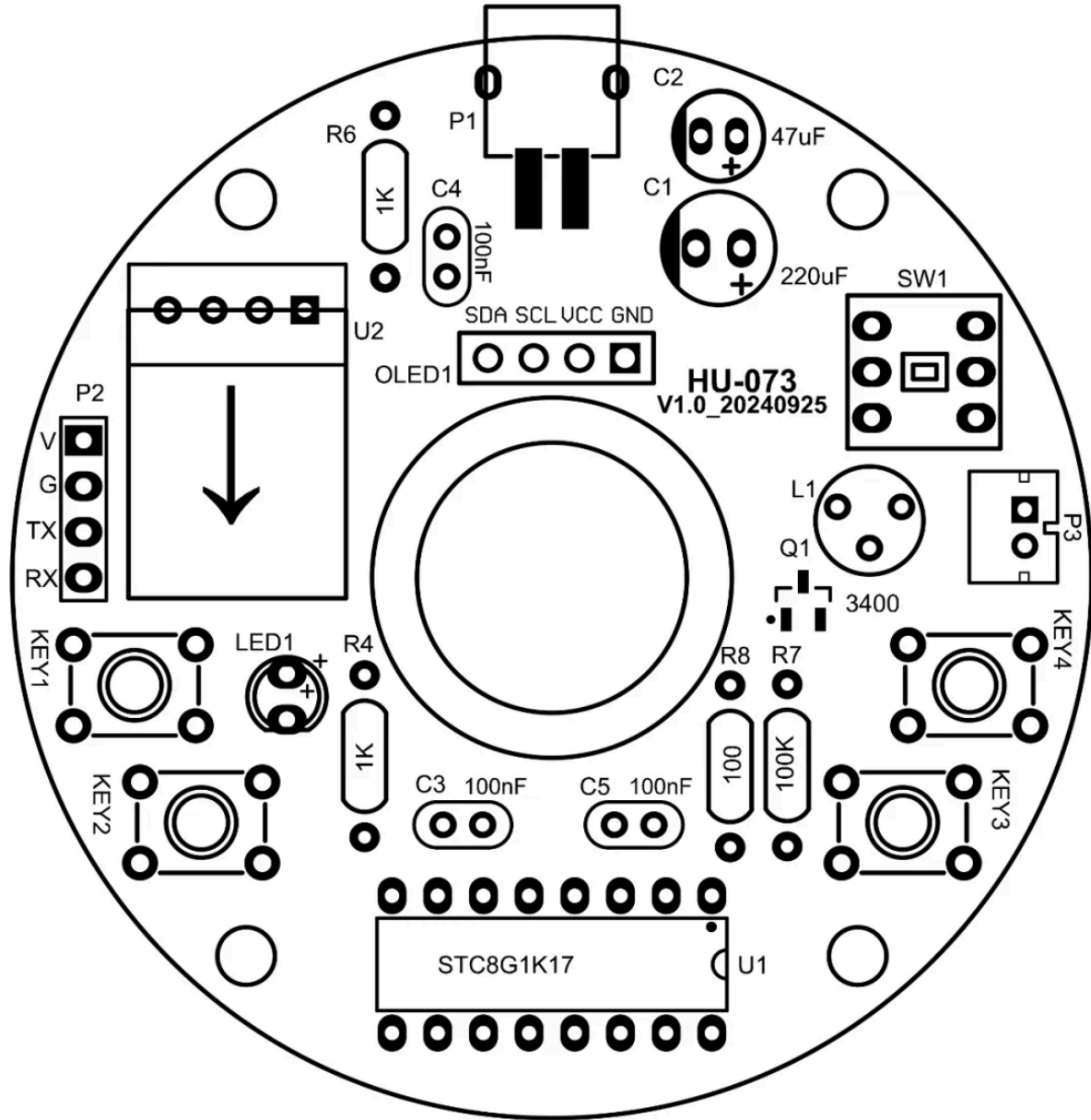
5	1K plug-in resistor	Direct insertion resistor 1K	R4, R6	2	/
6	100K in-line resistor	Direct insertion resistor 100K	R7	1	/
7	Ceramic capacitor 104	Ceramic capacitor 104	C3, C4, C5	3	/
8	6*6*12 buttons	6*6*12 key	KEY1-KEY4	4	/
9	button caps	Key cap	KEY1-KEY4	4	/
10	4P single row female socket	4P single row socket	OLED1	1	/
11	OLED screen	OLED screen	OLED1	1	/
12	Terminal Blocks	Connecting terminal	P3	1	/
13	Atomizer	Ultrasonic atomizer	P3	1	/
14	A03400 field effect tube	A03400 MOSFET	Q1	1	/
15	Three-legged inductor	Three pin inductor	L1	1	/
16	STC8G1K17	STC8G1K17	U1	1	/
17	IC socket 16P	IC socket 16P	U1	1	/
18	USB interface	USB socket	P1	1	/
19	Self-locking switch	Self-locking switch	SW1	1	/
20	Self-locking switch cap	Self-locking switch cap	SW1	1	/
twenty one	Temperature and humidity sensors	temperature and humidity sensor	U2	1	/
twenty two	Atomizer bracket	Ultrasonic atomizer bracket	/	1	/
twenty three	cotton swab	cotton swab	/	1	/
twenty four	power cord	Power line	/	1	/
25	PCB	PCB	/	1	/

26	manual	Instructions	/	1	/
27	shell	Housing	/	1	Optional
28	Screw bag	Screw pack	/	1	Optional

IV. Circuit schematic



V. Component distribution diagram



Note: Do not turn on the humidification function without water, otherwise it may cause damage to the humidifier.

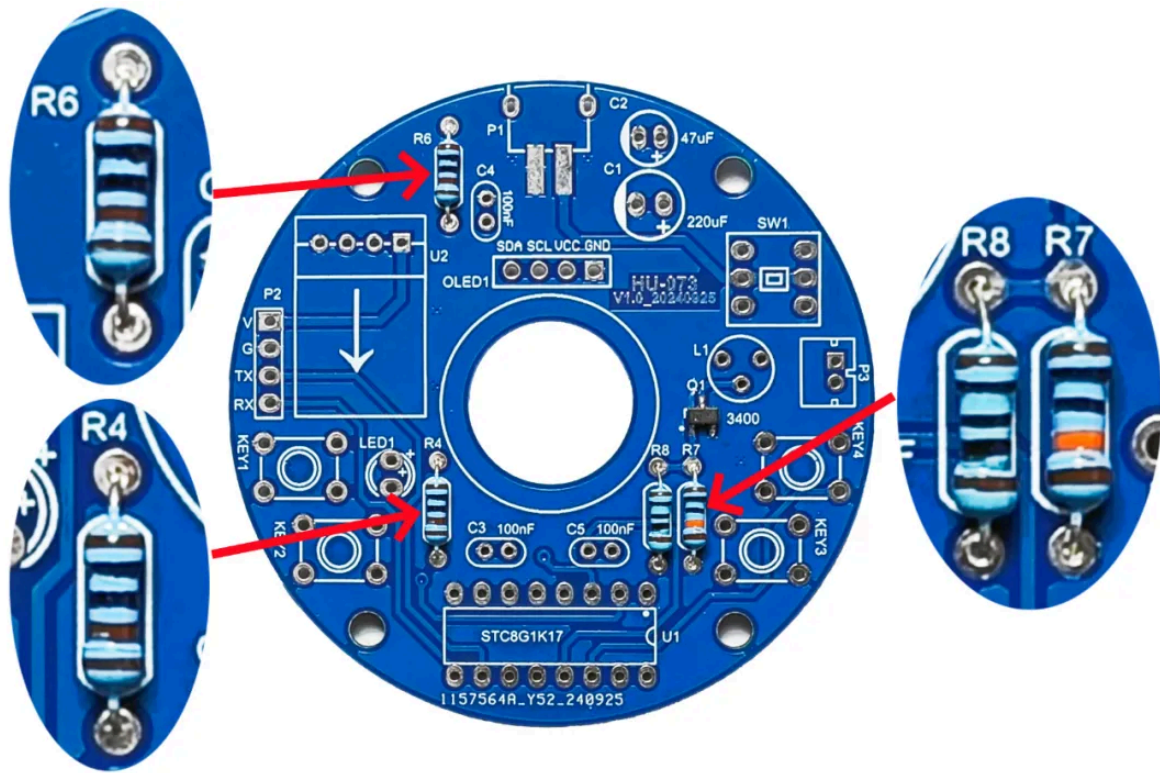
Attention: Do not turn on the humidification function without water, otherwise it may cause damage to the humidifier.

VI. Details of circuit board soldering steps

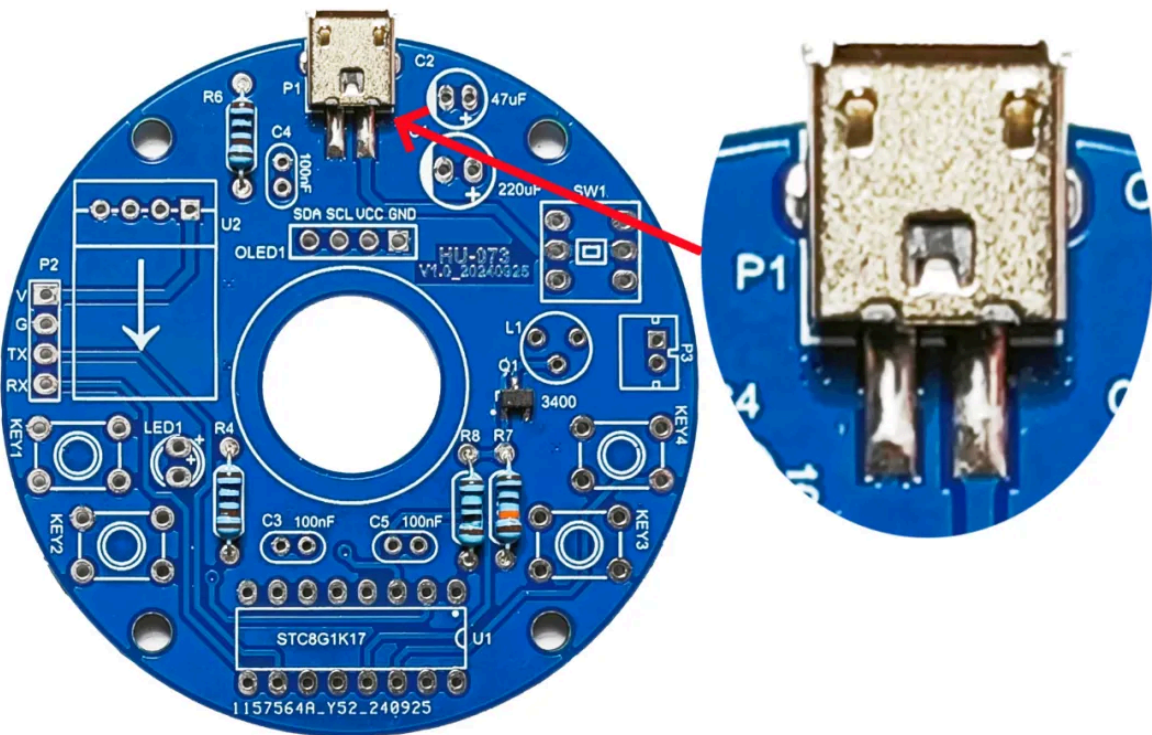
1. Welding AO3400 field effect tube.

Solder AO3400 MOSFET.

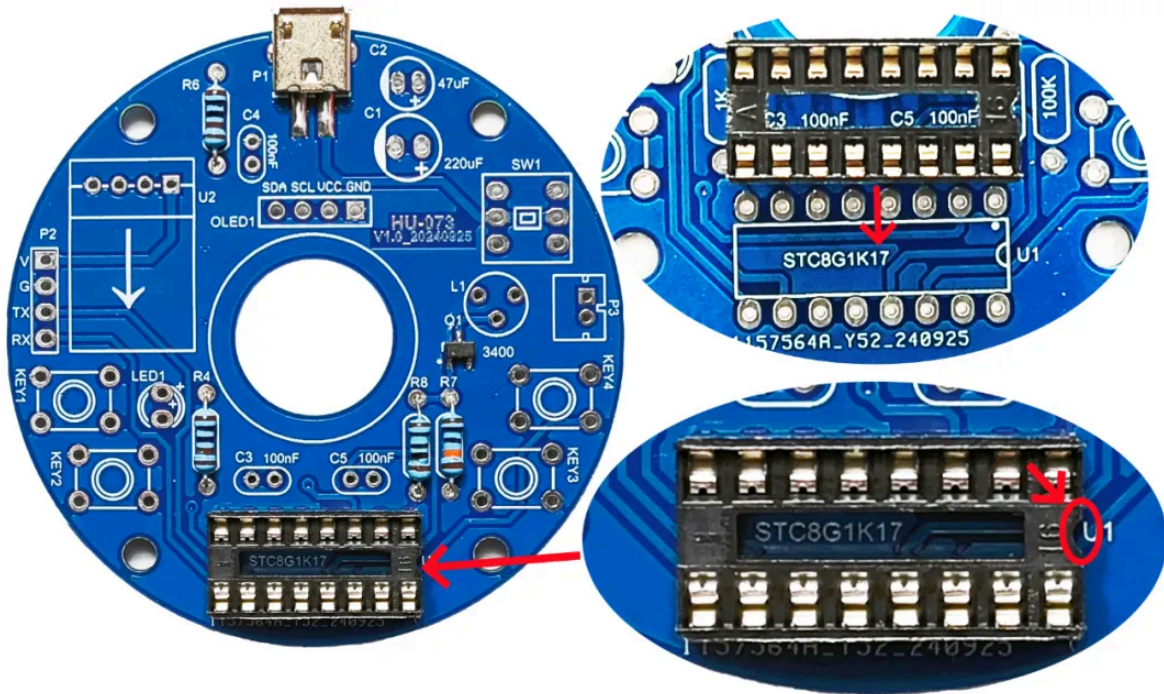
2. Solder 100Ω, 1K, and 100K resistors.
Solder 100Ω, 1K, 100K resistors.



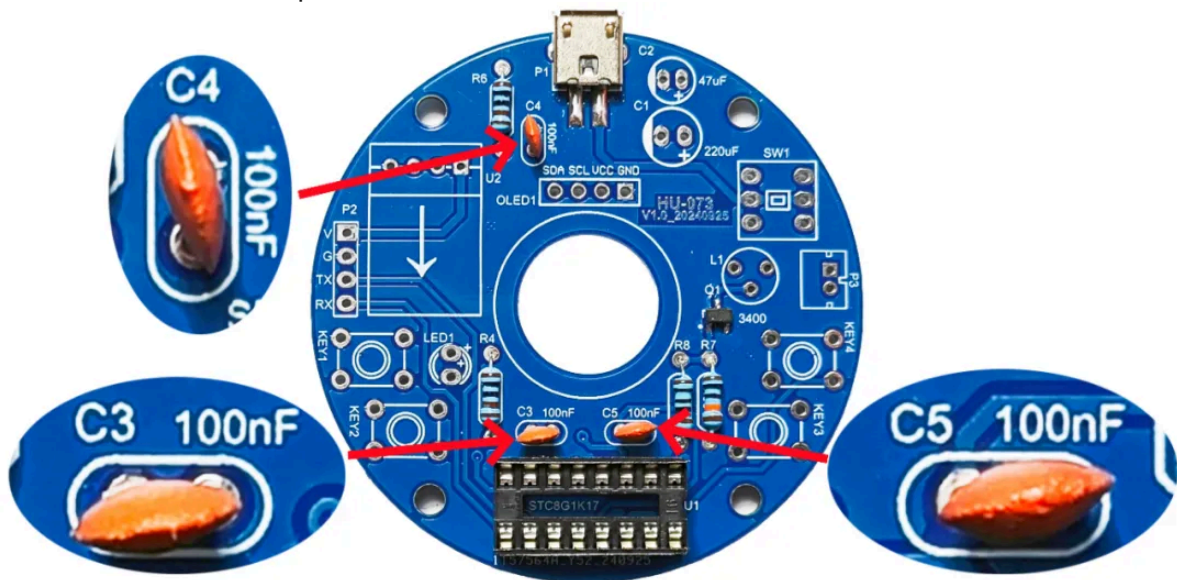
3. Solder the USB socket.
Solder USB socket.



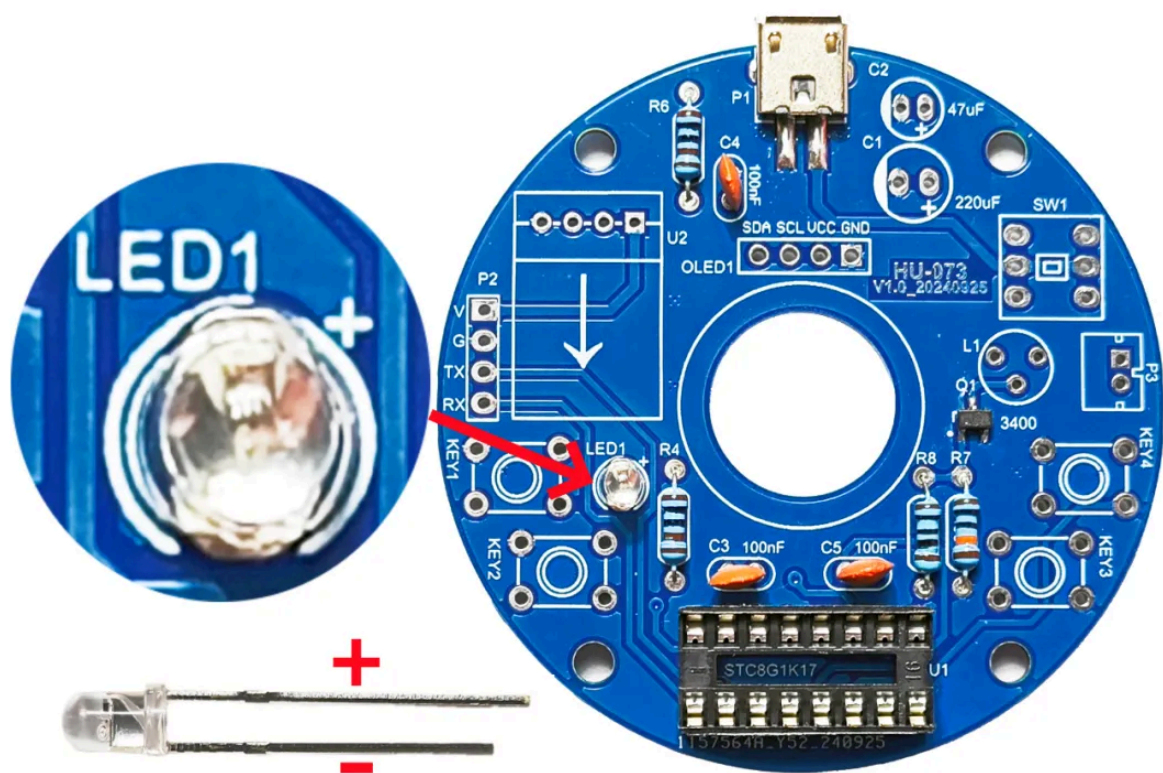
4. Solder the 16P IC socket. (The notched side of the IC socket faces the notched side of the silkscreen)
Solder 16P IC socket. (The side of the IC socket with a gap faces the side with a gap in the silk screen)



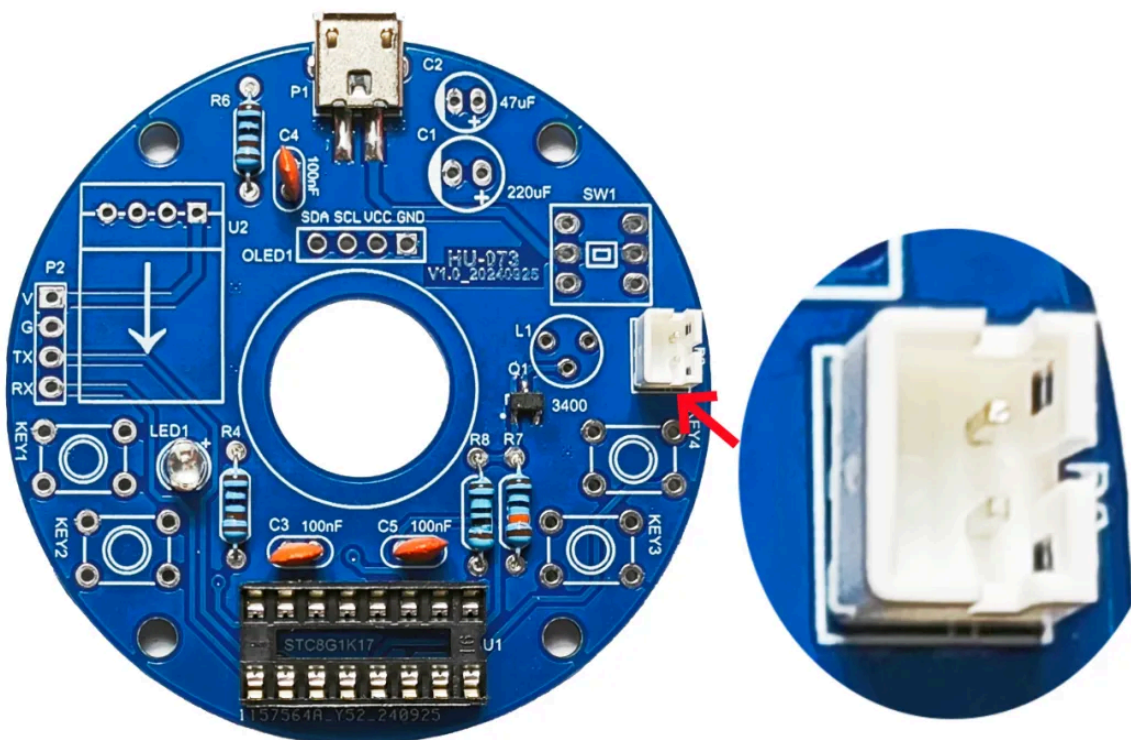
5. Solder the 104 ceramic capacitor.
Solder 104 ceramic capacitors.



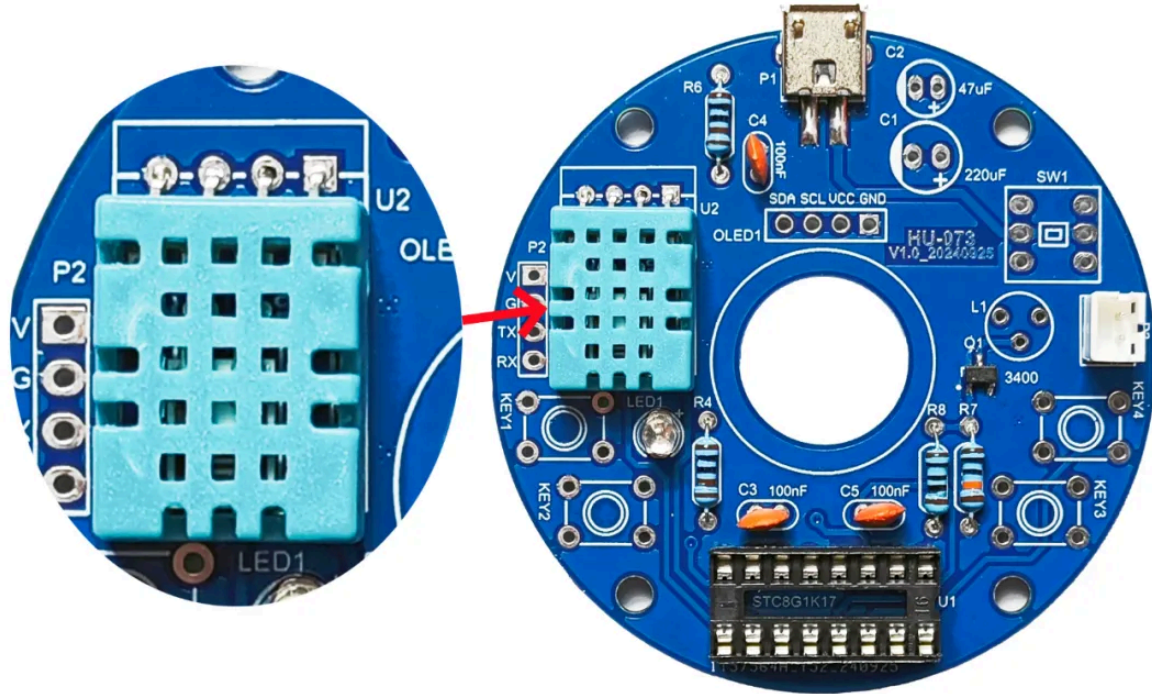
6. Solder the LED. (Long pin + short pin -)
Solder the light-emitting diode. (Long pin+Short pin -)



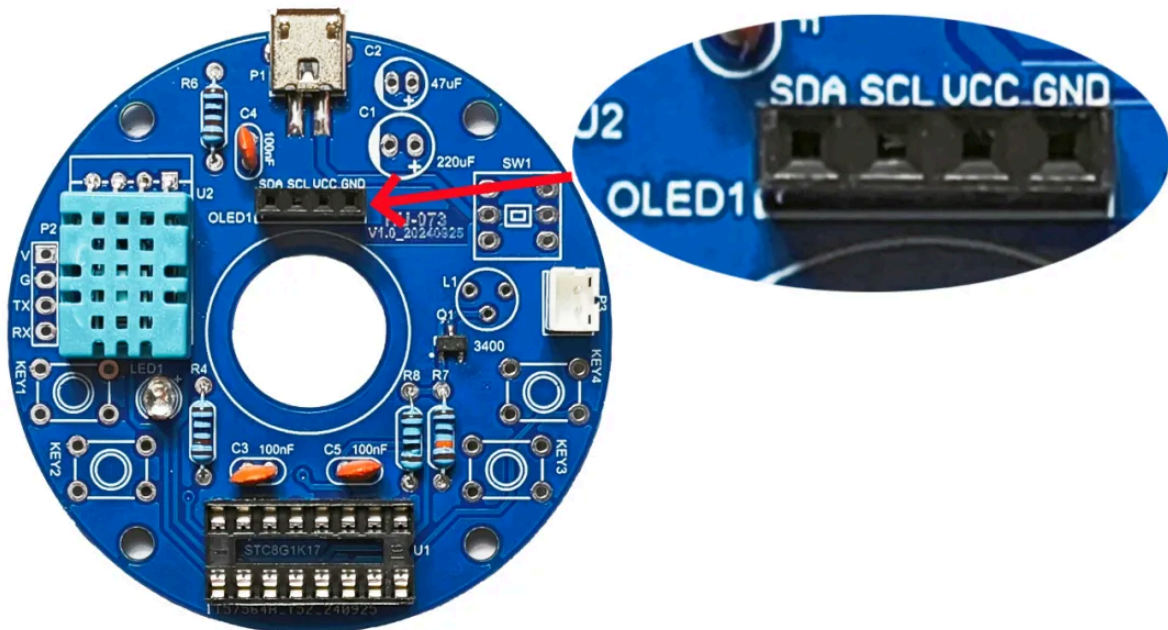
7. Solder the terminal blocks.
Solder connecting terminal.



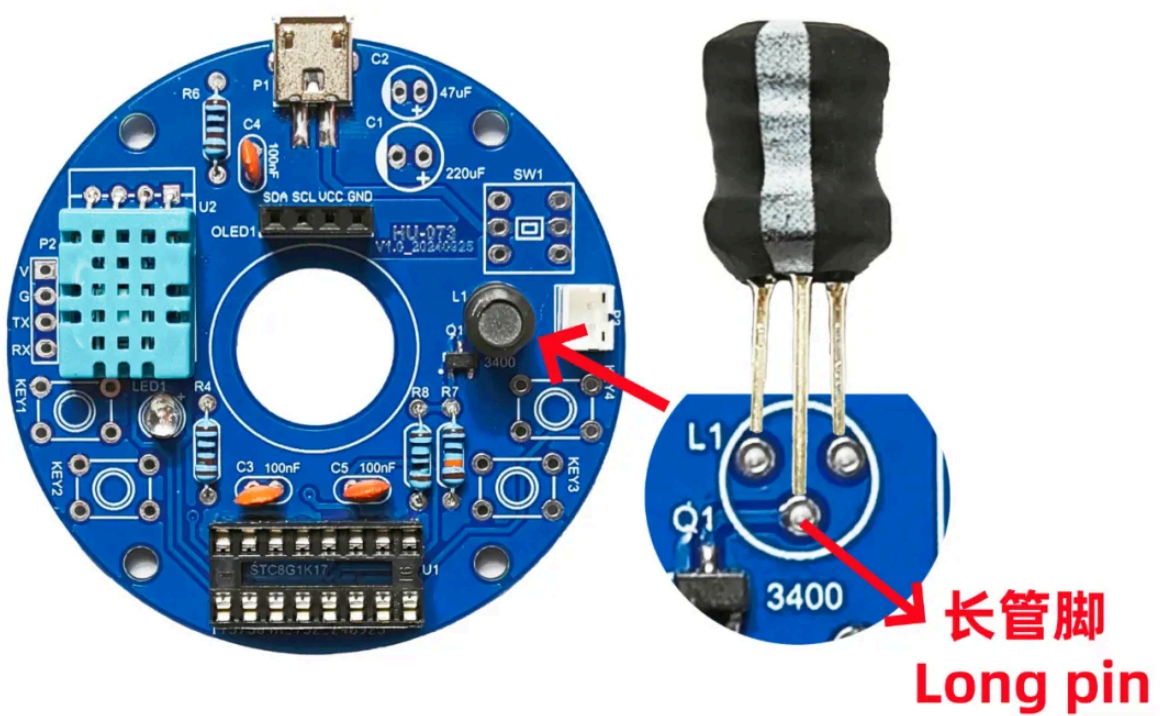
8. Bend and solder the temperature and humidity sensor.
Bend and weld the temperature and humidity sensor.



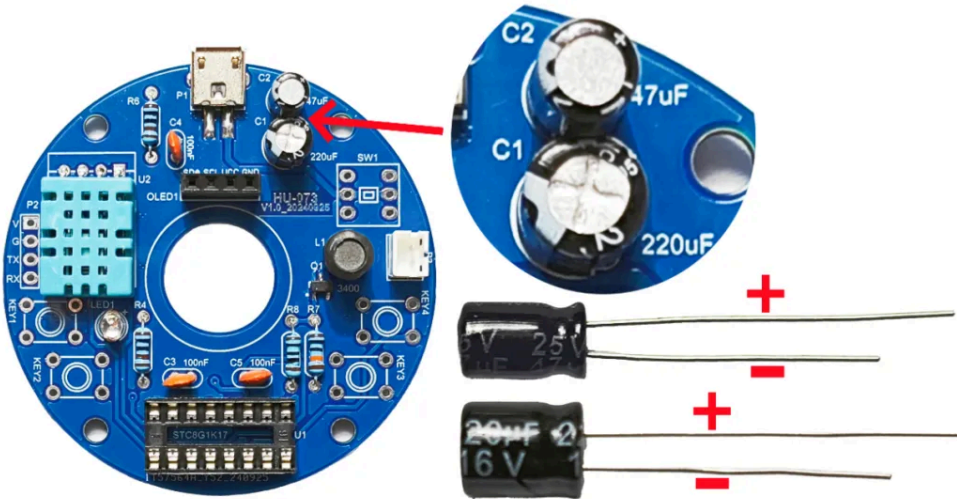
9. Weld the 4P single row female header.
Solder 4P single row socket.



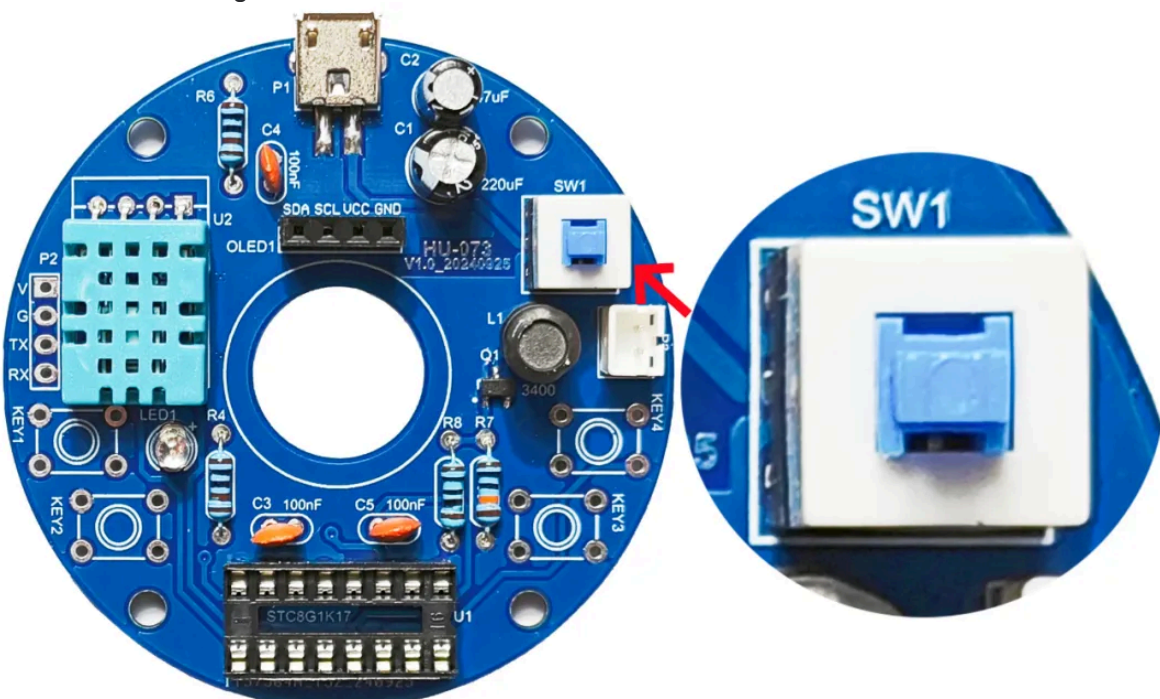
10. Solder the three-pin inductor .
Solder three pin inductor .



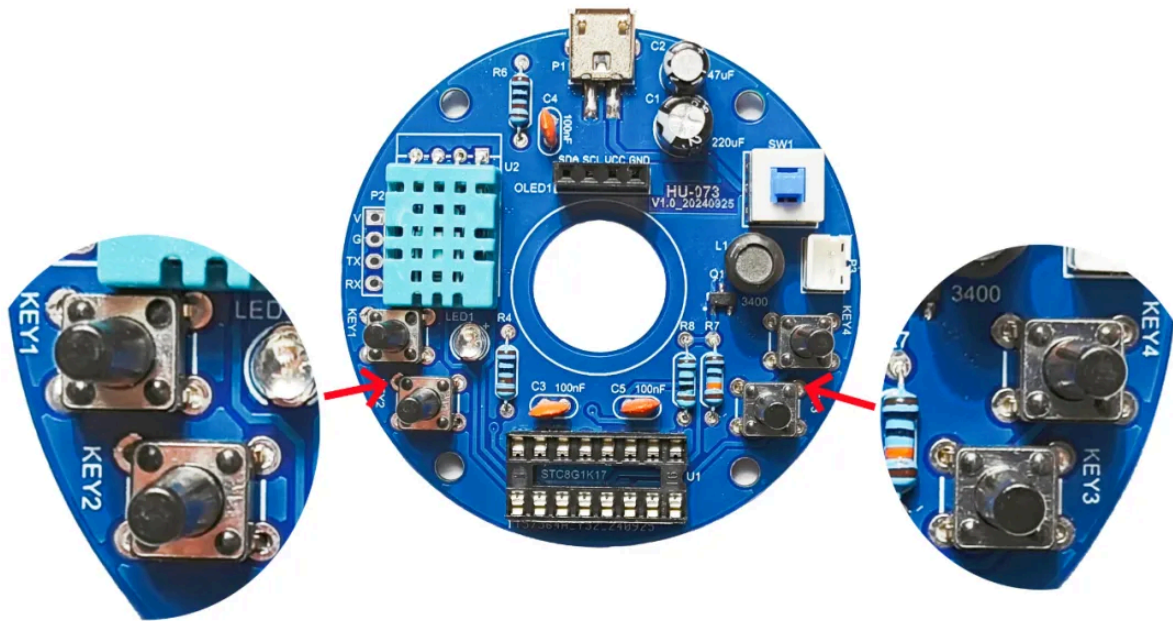
11. Solder 47uF and 220uF electrolytic capacitors. (Pin long + short -)
Solder 47uF and 220uF electrolytic capacitors. (Long pin+Short pin -)



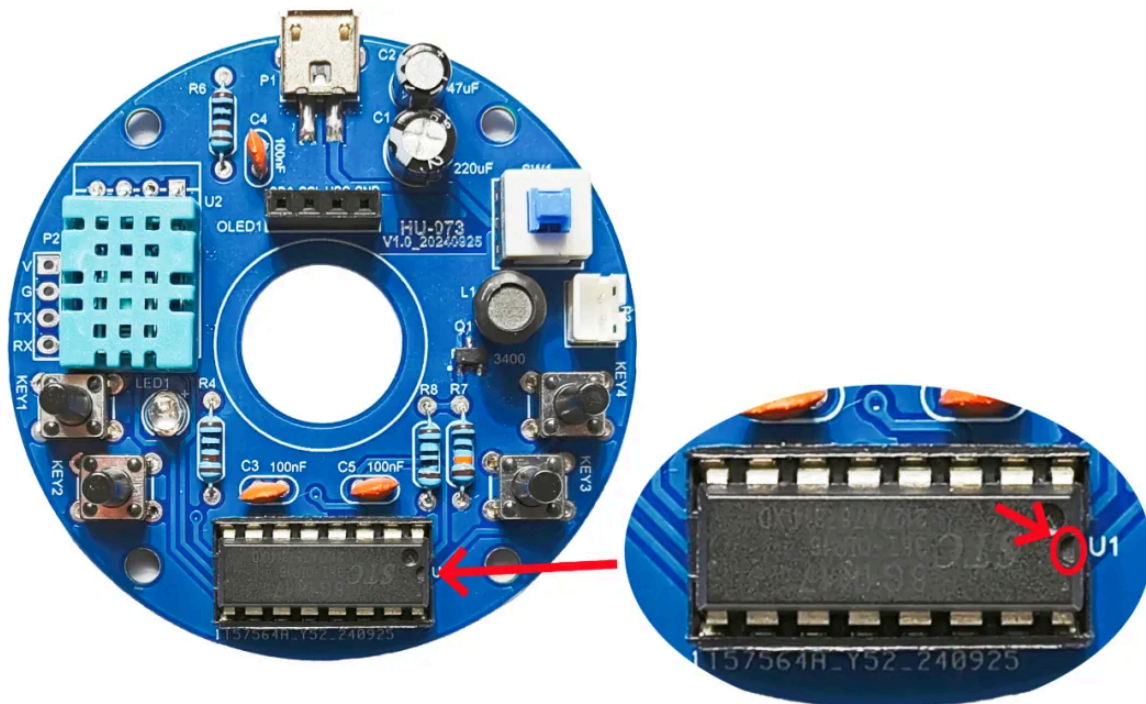
12. Weld the self-locking switch.
Solder self-locking switch.



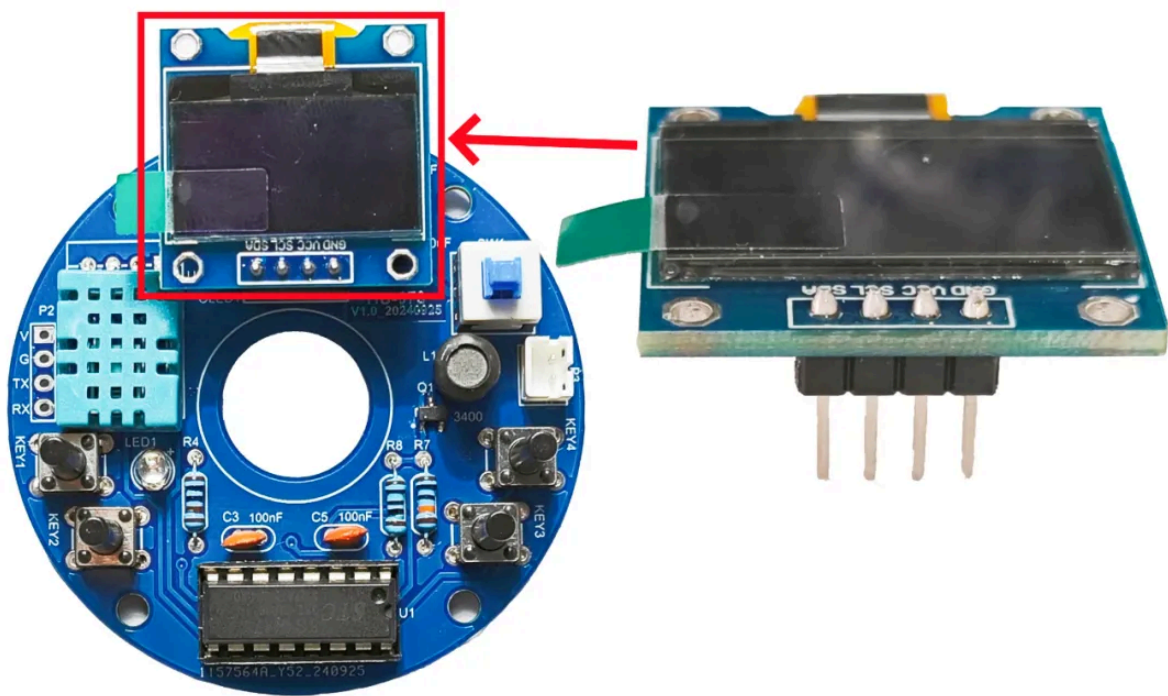
13. Solder 6*6*12 buttons.
Solder 6*6*12 key.



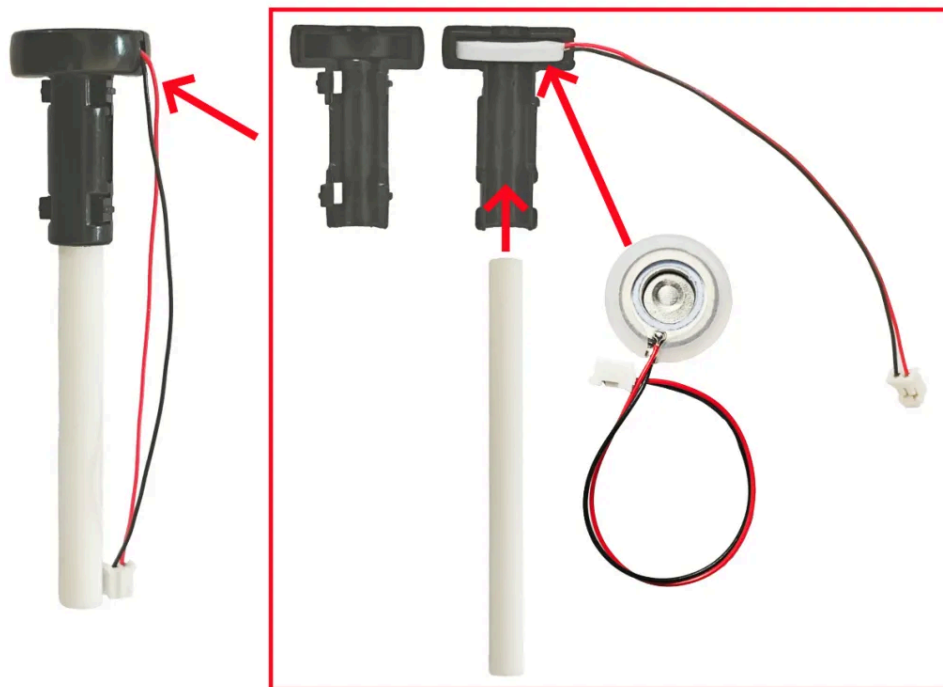
14. Insert the STC8G1K17 chip into the 16P IC socket. (The notched side of the IC socket faces the notched side of the silkscreen)
Insert the STC8G1K17 chip into the 16P IC socket. (The side of the IC socket with a gap faces the side with a gap in the silk screen)



15. Solder the OLED screen and install it on the 4P single-row female socket.
Solder the OLED screen and install it onto the 4P single row mother stand.

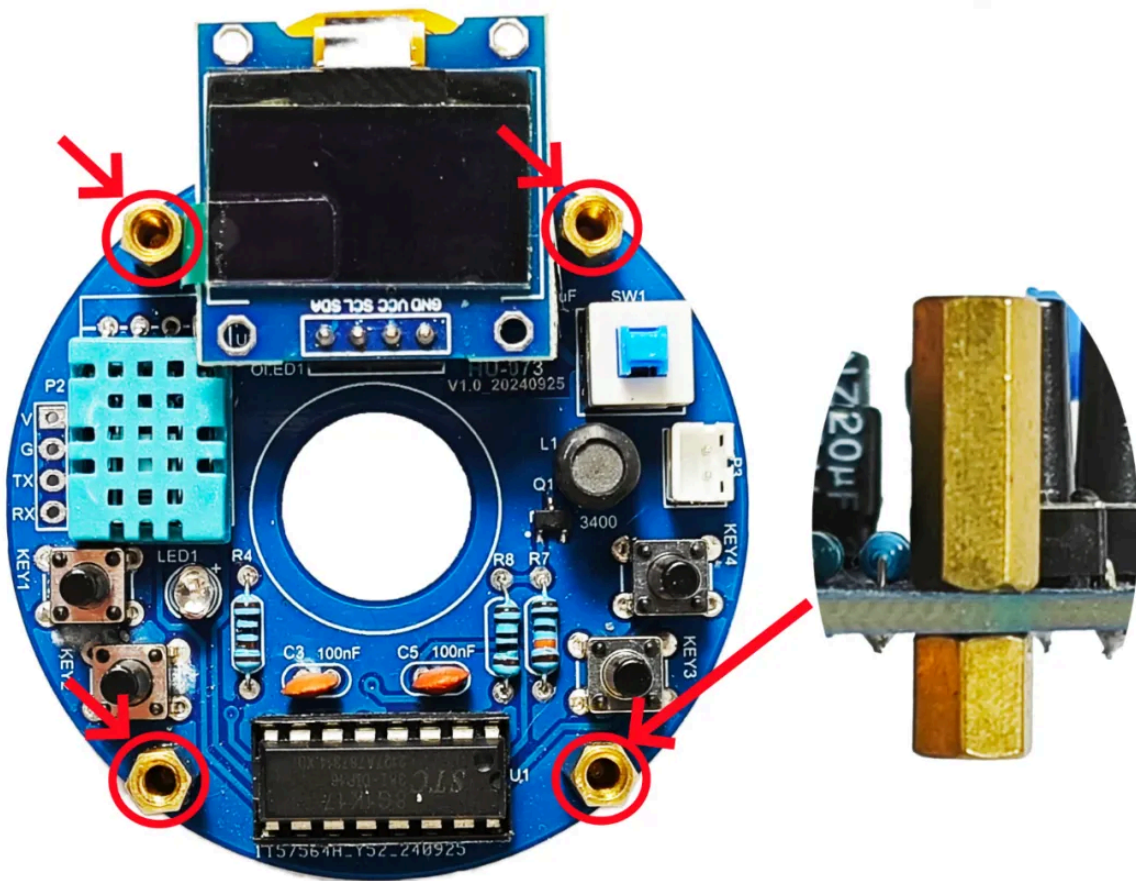


16. Install the atomizer into the atomizer holder and attach a cotton swab. (The side of the atomizing sheet rubber sleeve with a gap faces upwards)

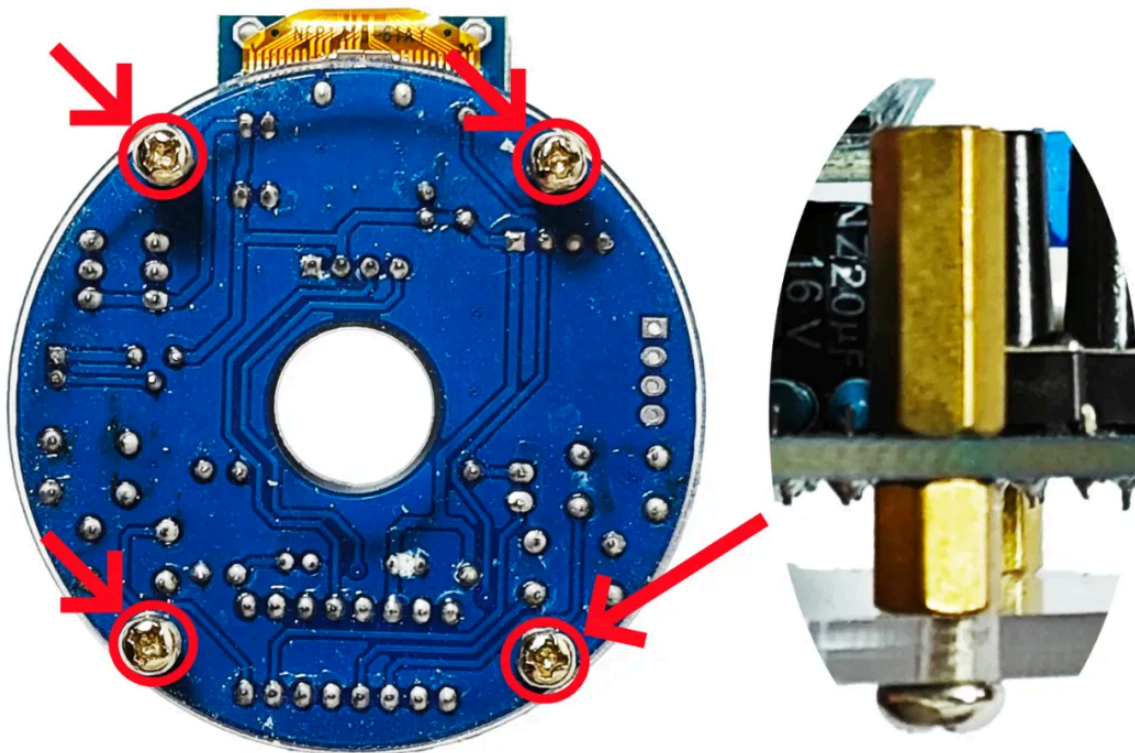


17. Fix the M3 single-pass copper pillar and double-pass copper pillar on the circuit board.

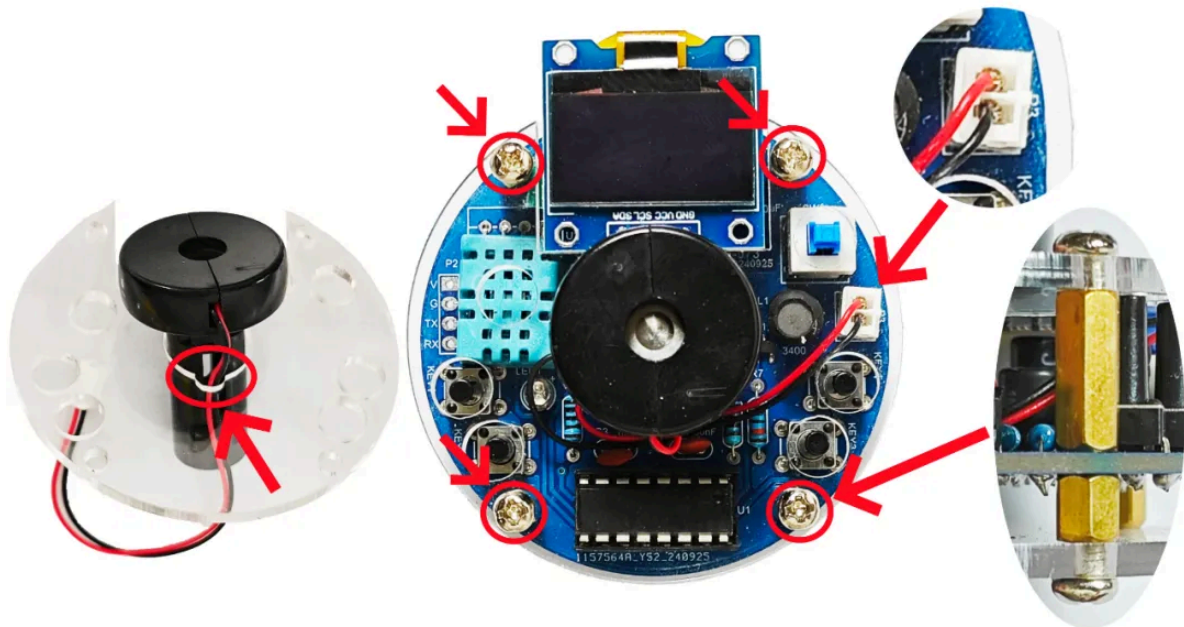
Fix the M3 single pass copper pillar and double pass copper pillar on the circuit board.



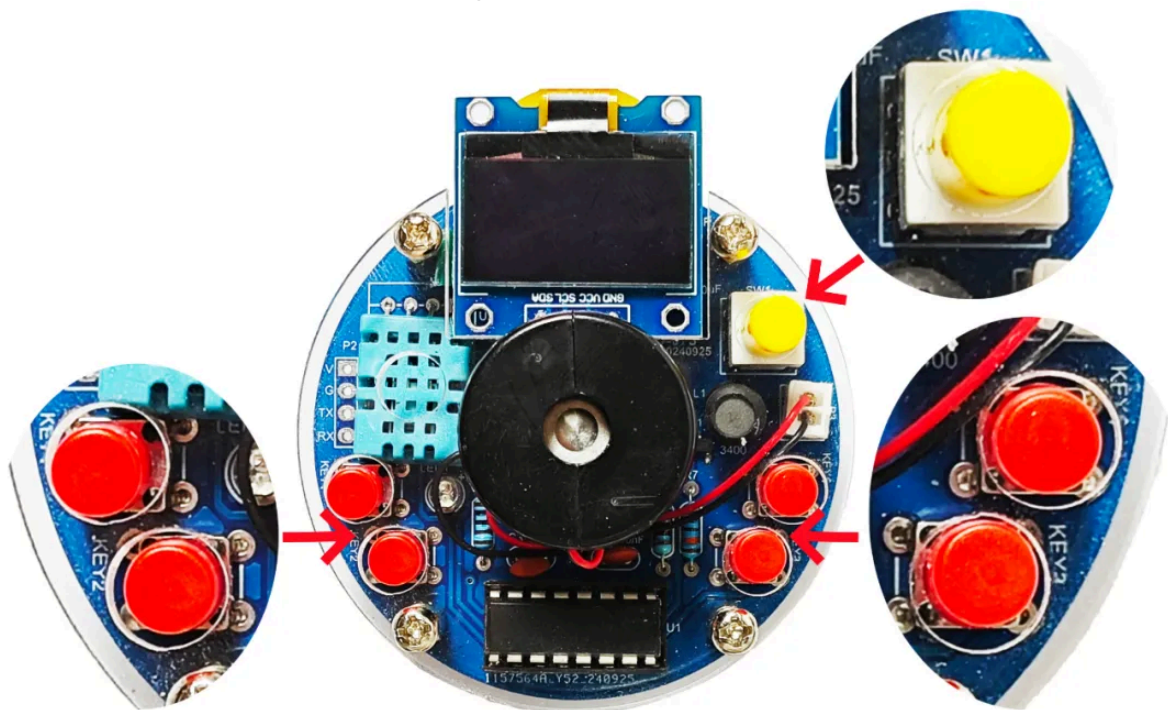
18. Install the bottom shell and secure it with M3 screws.
Install the bottom shell and secure it with M3 screws.



19. Pass the atomizer bracket through the top shell and connect the wires to the wiring terminals. Finally, fix the shell with M3 screws.
Thread the atomizer bracket through the top shell, connect the wire to the terminal block, and finally fix the shell with M3 screws.

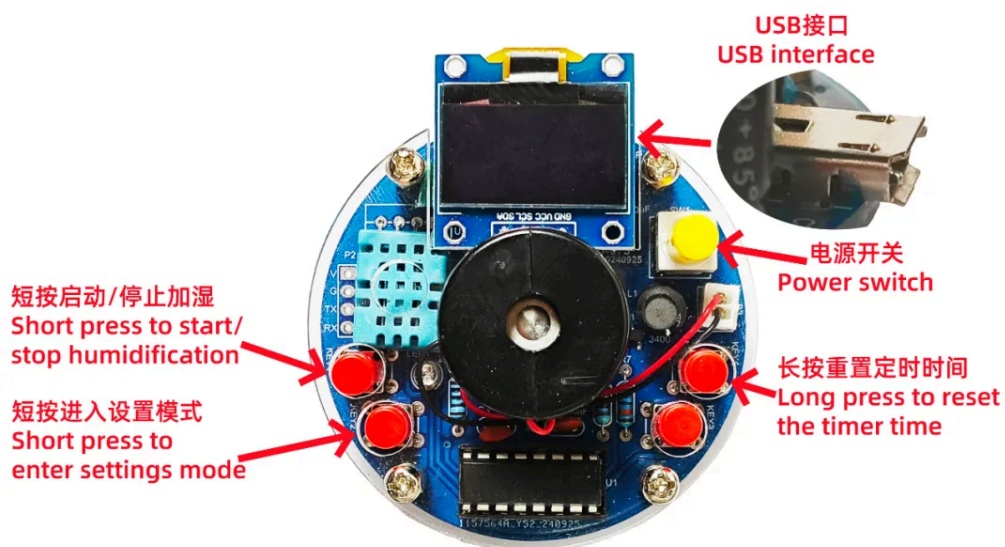


20. Install the button cap and self-locking switch cap.
Install the button cap and self-locking switch cap.




VII. Function Introduction

1. Interface Description




2. Operating instructions

(1) First startup interface (language selection)

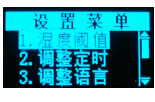

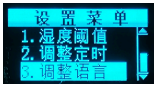
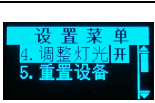
Startup interface			
Function	Interface display/status	operate	illustrate
Select language		Short press KEY3/K EY4	Chinese/English available
Enter the main interface	/	Short press KEY1/K EY2	/


(2) Main interface






Main interface			
Function	Interface display/status	operate	illustrate
Start/Stop humidification		Short press KEY 1	The timer countdown will stop automatically when it is reset or the humidity exceeds the set threshold. When the timer countdown is reset, short press KEY1 again to restart the countdown and start humidification. When the humidity exceeds the threshold, the humidification icon will not change.
Reset timer countdown	/	Long press KEY 4	Reset the timer countdown to the set timer time
Enter setup mode	/	Short press KEY 2	/

(3) Settings interface


Settings interface			
Function	Interface display/status	operate	illustrate
Humidity threshold		Previous option: Short press KEY4 Next option: Short press KEY3	Short press KEY2 to enter the corresponding settings
Adjust timing		Confirm: Short press KEY2	
Adjust language		Return: Short press KEY1	
Adjust the lighting		Automatically returns to the main interface after about 20 seconds	Short press KEY2 to switch on/off, on by default

Reset the device		conditions without any operation	Restore the device to factory settings. To prevent accidental touches, long press KEY1 to reset.
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(4) Setting operation


Set Operation			
Function	Interface display/status	operate	illustrate
Setting humidity thresholds		Add/Switch: Short press KEY4 Reduce/switch: short press KEY3 Confirm and save: Short press KEY1 Return: Short press KEY2	Range 0-99%, default value is 80%
Set the timer			Range 0-255min, default value is 60min
Set language			/

(1) First launch interface (select language)

Splash screens			
Function	Interface display/status	Operation	Description
select language		Short press KEY3/KEY4	Optional Chinese/English
Enter the main interface	/	Short press KEY1/KEY2	/

(2) Main interface



Main interface			
Function	Interface display/status	Operation	Description
Start/Stop Humidification		Short press KEY1	When the timer countdown is reset to zero or the humidity exceeds the set threshold, it will automatically stop. When the timer countdown is reset to zero, short press KEY1 again to restart the countdown and start humidification.
Reset timer countdown	/	Long press KEY4	Reset the timer countdown to the set timer time
Enter setup mode	/	Short press KEY2	/

(3) Settings interface

Settings interface			
Function	Interface display/status	Operation	Description
Humidity threshold		Previous option: Short press KEY4 Next option: Short press KEY3 Confirmation: Short press KEY2 Return: Short press KEY1	Short press KEY2 to enter the corresponding settings
Adjust timing			
Adjust language			
Adjust the lighting		After about 20 seconds of inactivity, it will automatically return to the main interface	Short press KEY2 to switch on/off, default on
Reset device			To reset the device to its factory settings, long press KEY1 to prevent accidental touch

(4) Set operation

Set operation			
Function	Interface display/status	Operation	Description
Set humidity threshold		Add value/switch: Short press KEY4 Subtraction/switch: Short press KEY3 Confirm and save: Short press KEY1 Return: Short press KEY2	Range 0-99%, default value is 80%
Set timer			Range 0-255 minutes, default value is 60 minutes
system language			/

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